

AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** An immunogenic vaccine composition for ~~vaccinating~~ dogs comprising an agent capable of raising an immune response against *Mycoplasma cynos* (*M. cynos*) in a dog, wherein said agent comprises inactivated or attenuated *M. cynos*, ~~and wherein said immune response is protective against Canine Infectious Respiratory Disease (CIRD).~~

2.-7. **(Canceled)**

8. **(Currently amended)** A pharmaceutical composition comprising an immunogenic vaccine composition according to Claim 1 and a pharmaceutically acceptable carrier, diluent or adjuvant.

9. **(Currently amended)** The immunogenic vaccine composition according to Claim 1 further comprising any one or more of:

an agent capable of raising an immune response in a dog against canine respiratory coronavirus (CRCV);

an agent capable of raising an immune response in a dog against canine parainfluenzavirus (CPIV);

an agent capable of raising an immune response in a dog against canine adenovirus type 2 (CAV-2);

an agent capable of raising an immune response in a dog against canine herpesvirus (CHV); and

an agent capable of raising an immune response in a dog against *Bordetella bronchiseptica* (*B. bronchiseptica*).

10. **(Currently amended)** An immunogenic vaccine composition according to Claim 9 wherein the agent capable of raising an immune response in a dog against CRCV comprises inactivated or attenuated CRCV.

11. **(Currently amended)** An immunogenic vaccine composition according to Claim 9 wherein the agent capable of raising an immune response in a dog against CRCV comprises a Spike protein or a hemagglutinin-esterase (HE) protein of CRCV, or an immunogenic portion of the Spike or HE protein.

12. (Currently amended) An immunogenic vaccine composition according to Claim 9 wherein the agent capable of raising an immune response in a dog against CPIV comprises inactivated or attenuated CPIV.

13. (Currently amended) An immunogenic vaccine composition according to Claim 9 wherein the agent capable of raising an immune response in a dog against CAV-2 comprises inactivated or attenuated CAV-2.

14. (Currently amended) An immunogenic vaccine composition according to Claim 9 wherein the agent capable of raising an immune response in a dog against CHV comprises inactivated or attenuated CHV.

15. (Currently amended) An immunogenic vaccine composition according to Claim 9 wherein the agent capable of raising an immune response in a dog against *B. bronchiseptica* comprises inactivated or attenuated *B. bronchiseptica*.

16. (Withdrawn) A method of eliciting an immune response in ~~vaccinating~~ a dog against ~~canine infectious respiratory disease (CIRD)~~ comprising administering to the dog an immunogenic vaccine composition according to Claim 1.

17. (Withdrawn) A method of treating CIRD in a dog comprising administering to the dog an immunogenic vaccine composition according to Claim 1.

18. (Withdrawn) A method of stimulating an immune response against *M. cynos*, the method comprising administering to ~~a~~ the dog an immunogenic composition according to Claim 1, wherein said immunogenic composition stimulates an immune response agent capable of raising an immune response against *M. cynos* in the ~~the~~ dog.

19. (Withdrawn) The method according to Claim 18 further comprising administering to the dog any one or more of:

an agent capable of raising an immune response against *S. zooepidemicus* in a dog;

an agent capable of raising an immune response against a *Chlamydophila* in a dog

an agent capable of raising an immune response in a dog against CRCV;

an agent capable of raising an immune response in a dog against CPIV;

an agent capable of raising an immune response in a dog against CAV-2;

an agent capable of raising an immune response in a dog against CHV; and

an agent capable of raising an immune response in a dog against *B. bronchiseptica*.

20.-39. (Canceled)

40. (Currently amended) An immunogenic vaccine composition comprising:

(b) an agent capable of raising an immune response against *M. cynos* in a dog;  
and

(d) an agent capable of raising an immune response against CRCV in a dog.

41. (Currently amended) The immunogenic vaccine composition according to Claim 40 further comprising any one or more of:

(c) an agent capable of raising an immune response against a *Chlamydomphila* in a dog;

(e) an agent capable of raising an immune response in a dog against CPIV;

(f) an agent capable of raising an immune response in a dog against CAV-2;

(g) an agent capable of raising an immune response against CHV in a dog; and

(h) an agent capable of raising an immune response in a dog against *B. bronchiseptica*.

42. (Currently amended) The immunogenic vaccine composition according to Claim 40 further comprising:

(a) an agent capable of raising an immune response against *S. zooepidemicus* in a dog.

43.-56. (Canceled)

57. (Currently amended) The immunogenic vaccine composition according to Claim 1 further comprising an agent capable of raising an immune response against *Streptococcus equi sub species zooepidemicus* (*S. zooepidemicus*) in a dog.

58. (Currently amended) The immunogenic vaccine composition according to Claim 57 wherein the agent capable of raising an immune response against *S. zooepidemicus* in a dog comprises inactivated or attenuated *S. zooepidemicus*, or a structural protein of *S. zooepidemicus* or an immunogenic portion thereof, or a sequence variant of said structural protein or immunogenic portion thereof, or a nucleic acid encoding said structural protein, portion or

~~sequence variant, wherein said sequence variant has at least 90% sequence identity to the polypeptide sequence of said structural protein or immunogenic portion thereof.~~

59. (Currently amended) The immunogenic vaccine composition according to Claim.1 further comprising an agent capable of raising an immune response against a *Chlamydomphila* in a dog.

60. (Currently amended) The immunogenic vaccine composition according to Claim 59 wherein the agent capable of raising an immune response in a dog against *Chlamydomphila* comprises inactivated or attenuated *Chlamydomphila abortus*, or a structural protein of *Chlamydomphila abortus* ~~or an immunogenic portion thereof, or a sequence variant of said structural protein or immunogenic portion thereof,~~ or a nucleic acid encoding said structural protein, ~~portion or sequence variant, wherein said sequence variant has at least 90% sequence identity to the polypeptide sequence of said structural protein or immunogenic portion thereof.~~

61. (Currently amended) The immunogenic vaccine composition according to Claim 59 wherein the agent capable of raising an immune response in a dog against a *Chlamydomphila* comprises inactivated or attenuated *Chlamydomphila psittaci*, or a structural protein of *Chlamydomphila psittaci* ~~or an immunogenic portion thereof, or a sequence variant of said structural protein or immunogenic portion thereof,~~ or a nucleic acid encoding said structural protein, ~~portion or sequence variant, wherein said sequence variant has at least 90% sequence identity to the polypeptide sequence of said structural protein or immunogenic portion thereof.~~

62. (Currently amended) The immunogenic vaccine composition according to Claim 59 wherein the agent capable of raising an immune response in a dog against a *Chlamydomphila* comprises inactivated or attenuated *Chlamydomphila felis*, or a structural protein of *Chlamydomphila felis* ~~or an immunogenic portion thereof, or a sequence variant of said structural protein or immunogenic portion thereof,~~ or a nucleic acid encoding said structural protein, ~~portion or sequence variant, wherein said sequence variant has at least 90% sequence identity to the polypeptide sequence of said structural protein or immunogenic portion thereof.~~

63. (Currently amended) The immunogenic vaccine composition according to Claim 59 wherein the agent capable of raising an immune response in a dog against a *Chlamydomphila* comprises inactivated or[[.]] attenuated *Chlamydia muridarum*, *Chlamydia pecorum*, *Chlamydia pneumoniae*, *Chlamydia suis* or *Chlamydia trachomatis*, or a structural protein of *Chlamydia*

**Application No.:** 10/563,199  
**Filing Date:** September 1, 2006

*muridarum*, *Chlamydia pecorum*, *Chlamydia pneumoniae*, *Chlamydia suis* or *Chlamydia trachomatis*, or an immunogenic portion thereof, or a sequence variant of said structural protein or immunogenic portion thereof, or a nucleic acid encoding said structural immunogenic protein, portion or sequence variant, wherein said sequence variant has at least 90% sequence identity to the polypeptide sequence of said structural protein or immunogenic portion thereof.